

09/27/2011

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1214832 - R8 SDMS



Third West Weekly Report 9/19/11 - 9/23/11

Shepherd, Michael

to:

Joyce Ackerman, 'Craig Barnitz (cbarnitz@utah.gov)'

09/27/2011 05:01 PM

Cc:

"Shepherd, Michael"

Hide Details

From: "Shepherd, Michael" <Michael.Shepherd@PacifiCorp.com>

To: Joyce Ackerman/R8/USEPA/US@EPA, "'Craig Barnitz (cbarnitz@utah.gov)'"  
<cbarnitz@utah.gov>

Cc: "Shepherd, Michael" <Michael.Shepherd@PacifiCorp.com>

### 3 Attachments



220953-1.pdf Weekly Report 09-19-11 to 09-23-11.pdf Third West Weekly Log 2011-38.pdf

Joyce & Craig,

Attached are the air monitoring results for 9/19 – 9/23. All results came back negative.

Also attached are the environmental audits, daily checklists (Weekly Report 09-19-11 to 09-23-11) and construction activities for this timeframe (Third West Weekly Log 2011-38).

Now that construction activities will occur daily, this is how your weekly updates should look like. Please let me know if you have any questions.

Thanks,

Mike Shepherd  
Project Manager  
Rocky Mountain Power - Major Projects  
801.220.4584 Office  
801.631.1310 Cell  
801.220.2797 Fax  
[michael.shepherd@pacificorp.com](mailto:michael.shepherd@pacificorp.com)



September 26, 2011

Laboratory Code: RES  
Subcontract Number: NA  
Laboratory Report: RES 220953-1  
Project # / P.O. #: None Given  
Project Description: 3rd West Sub- Rocky Mtn Power

Eldon Romney  
R & R Environmental  
47 West 9000 South #2  
Sandy UT 84070

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 220953-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

A handwritten signature in dark ink, appearing to read "Jeanne Orr", is written over a horizontal line.

Jeanne Spencer Orr  
President

P: 303-964-1986  
F: 303-477-4275

5801 Logan Street, Suite 100 Denver, CO 80216

1-866-RESI-ENV  
www.reilab.com

# RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0; TDH: #30-0015

TABLE I. TEM AIR FILTER SAMPLE DATA AND ANALYTICAL RESULTS

RES Job Number: RES 220953-1  
 Client: R & R Environmental  
 Client Project Number / P.O.: None Given  
 Client Project Description: 3rd West Sub- Rocky Mtn Power  
 Date Samples Received: September 20, 2011  
 Analysis Type: TEM, AHERA  
 Turnaround: 3-5 Day  
 Date Samples Analyzed: September 26, 2011

Client ID Number	Lab ID Number	Area Analyzed	Air Volume Sampled	Number of Asbestos Structures Detected	Analytical Sensitivity	Asbestos Concentration	Filter Loading
		(mm <sup>2</sup> )	(L)		(s/cc)	(s/cc)	(s/mm <sup>2</sup> )
3W 091211-East	EM 798811	0.1100	660	ND	0.0053	BAS	BAS
3W 091211-South	EM 798812	0.1100	660	ND	0.0053	BAS	BAS
3W 091211-West	EM 798813	0.1100	658	ND	0.0053	BAS	BAS
3W 091211-North	EM 798814	0.1100	660	ND	0.0053	BAS	BAS
3W 091611-East	EM 798815	0.1100	618	ND	0.0057	BAS	BAS
3W 091611-South	EM 798816	0.1100	614	ND	0.0057	BAS	BAS
3W 091611-North	EM 798817	0.1100	568	ND	0.0062	BAS	BAS
3W 091611-West	EM 798818	0.1100	148	ND	0.0236	BAS	BAS

NA = Not Analyzed  
 ND = None Detected  
 BAS = Below Analytical Sensitivity  
 Average Grid Opening in mm<sup>2</sup> = 0.011

Filter Material = Mixed Cellulose Ester  
 Filter Diameter = 25 mm  
 Effective Filter Area = 385 sq mm

*gvr*  
 Digitally  
 signed by  
 Gina Vettriano  
 Date:  
 2011.09.26  
 11:24:41 -  
 00'00"

DATA QA

Due Date: 9-26-92 *cc* 9-21-11  
Due Time: 5:05a

**REI LAB****Reservoirs Environmental, Inc.**

6801 Logan St. Denver, CO 80216 • Ph: 303 964-1988 • Fax 303 477-4278 • Toll Free : 866 RESI-ENV

**Page :** 303-609-2068

**INVOICE TO: (IF DIFFERENT)****CONTACT INFORMATION:**

**RES 220953**

Company: K&R Environmental	Company: [Blank]	Contact: Dave Roskelley	Contact: Justin Kargis
Address: 47 W. 9000 S. Sandy, UT 84070	Address: [Blank]	Phone: 801 541-1035	Phone: 801 828-5219
		Fax: [Blank]	Fax: [Blank]
		Cell/pager: [Blank]	Cell/pager: [Blank]
Project Number and/or P.O. #:		Final Date Deliverable Email Address: dave@renviro.com	
Project Description/Location: 3rd West Sub - Rocky Mtn Power			

[illegible]

Number of samples received: (Additional samples shall be listed on attached long form.)

**NOTE:** REI will analyze incoming warrants based upon information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days, failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By: <u>[Signature]</u> Date/Time: <u>9/15/11</u>										Sample Condition: On Ice <input type="checkbox"/> Sealed <input type="checkbox"/> Thawed <input type="checkbox"/>				
Laboratory Use Only Received By: <u>[Signature]</u> Date/Time: <u>9.20.11</u> 9:08 Carrier: <u>FedEx</u>										Temp. (F°) <u>      </u> Yes / No <input type="checkbox"/> Yes / No <input checked="" type="checkbox"/>				
Results:	Contact	Phone	Email	Fax	Date	Time	Initials	Contact	Phone	Email	Fax	Date	Time	Initials
	Contact	Phone	Email	Fax	Date	Time	Initials	Contact	Phone	Email	Fax	Date	Time	Initials

TRK# 79519938 7670

## Attachment I

Key to Count Sheets  
Count Sheets  
Analytical Procedures

Structures identifications consist of an Asbestos Type followed by a Structure Type

### Asbestos Type

A = Amosite  
An = Anthophyllite  
C = Chrysotile  
Cr = Crocidolite  
T = Tremolite

### Structure Types

F = Fiber  
B = Bundle  
C = Cluster  
M = Matrix

ND = no structures detected  
M = other structure associated with a matrix  
NAM = Non Asbestos Mineral  
XGB = partly obscured by a grid bar

### Sizing Conversion

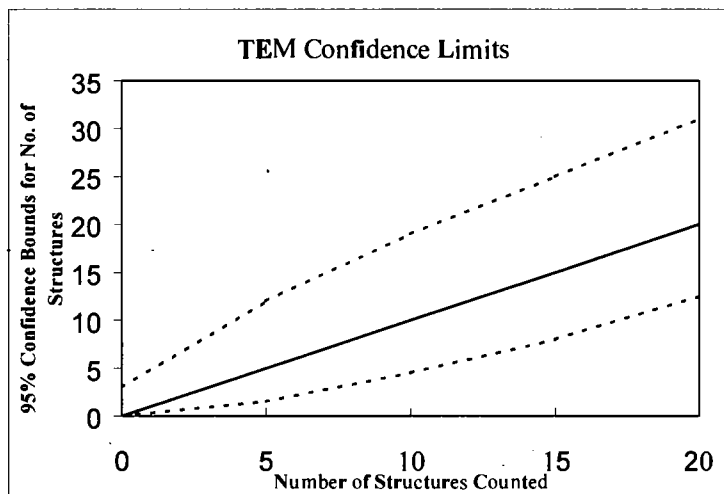
1 length unit = 5 mm on screen = 0.278 micron  
1.80 length units = 0.5 micron  
18.0 length units = 5 microns

1 width unit = 1 mm on screen = 0.0556 micron

### TEM Analysts

Jeanne S. Orr  
Nathan DelHiero  
Angela Heitger  
Jonathan Bernard

Paul D. LoScalzo  
Mark Steiner  
Norberto Zimbleman  
Robert Workman



Upper and lower 95% confidence bounds for the number of structures counted assuming a Poisson distribution.

Reservoirs Environmental, Inc.  
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 CX N S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm <sup>2</sup> )	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm <sup>2</sup> )	385
Secondary Filter Area (mm <sup>2</sup> )	
QA Type	

Client :	R&R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm <sup>2</sup> )	660
Date received by lab	9/20/11
Lab Job Number	220953
Lab Sample Number	798811

Analyzed by	JB
Analysis date	9/26/11
Method (D=Direct, I=indirect, IA=indirect astried)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

## F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

9/26/11

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	F5-6	ND												
	E5-6	ND												
	C5-6	ND					Pimp A	70% in hand			3-5% debris			
	G3-3	ND					Pimp B	80% in hand			3-5% debris			
	F3-3	ND												
B	H5-4	ND												
	G5-4	ND												
	F5-4	ND												
	E5-4	ND												
	C5-4	ND												

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material

T:\QAC\NW\APLab Docs\TEM Count Sheet rev. 1-11-10

Reservoirs Environmental, Inc.  
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 CX N S
Voltage d(V)	100 KV
Magnification	20KX 10KX
Grid opening area (mm <sup>2</sup> )	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm <sup>2</sup> )	385
Secondary Filter Area (mm <sup>2</sup> )	
QA Type	

Client:	R&K
Sample Type (A=Air, 0=Dust):	A
Air volume (L) or dust area (cm <sup>2</sup> )	600
Date received by lab	9/20/11
Lab Job Number	220953
Lab Sample Number:	798812

Analyzed by	JB
Analysis date	9/26/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AA
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

## F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	K5-1	ND												
	H5-1	ND												
	G5-1	ND												
	F5-1	ND												
	E5-1	ND												
	C5-1	ND												
	B5-1	ND												
B	L5-1	ND												
	K5-1	ND												
	H5-1	ND												

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material  
T:\QAQC\WV\Lab Docs\TEM Count Sheet rev. 1-11.xls

Reservoirs Environmental, Inc.  
TEM Asbestos Structure Count

Page 1 of \_\_\_\_\_

Laboratory name:	REI
Instrument	JEOL 100 CX N S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm <sup>2</sup> )	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm <sup>2</sup> )	385
Secondary Filter Area (mm <sup>2</sup> )	
QA Type	

Client:	R&R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm <sup>2</sup> )	658
Date received by lab	9/20/11
Lab Job Number	220953
Lab Sample Number	798813

Analyzed by	JB
Analysis date	9/26/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AI
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	H3-6	ND												
	G3-6	ND												
	F3-6	ND												
	E3-6	ND												
	G4-1	ND												
B	H3-6	ND												
	H3-6	ND												
	G3-6	ND												
	F3-6	ND												
	E3-6	ND												

LA = Libby-type amphibole

-OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material

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Reservoirs Environmental, Inc.  
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 CX N S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm <sup>2</sup> )	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm <sup>2</sup> )	385
Secondary Filter Area (mm <sup>2</sup> )	
QA Type	

Client :	R&K
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm <sup>2</sup> )	660
Date received by lab	9/20/11
Lab Job Number	22053
Lab Sample Number	798814

Analyzed by	JB
Analysis date	9/26/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AA
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

## F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	t = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	G3-6	ND												
	XF3-6	ND					Prep A	60% instant		5-7% debris				
	E3-6	ND					Prep B	50% instant		5-7% debris				
	C3-6	ND												
	G4-6	ND												
B	G4-1	ND												
	F4-4	ND												
	G4-3	ND												
	F4-6	ND												
	G5-1	ND												

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material  
T:\MAGNET\APLab Docs\TEM Count Sheet rev. 1-11.xls

Reservoirs Environmental, Inc.  
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 CX N S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm <sup>2</sup> )	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm <sup>2</sup> )	38S
Secondary Filter Area (mm <sup>2</sup> )	
QA Type	

Client:	R&R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm <sup>2</sup> )	618
Date received by lab	9/20/11
Lab Job Number:	220953
Lab Sample Number	798815

Analyzed by	JB
Analysis date	9/26/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

## F-Factor Calculation (Indirect Praps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	W/Th		Amphibole	C	NAM		Sketch	Photo	EDS
A	K3-1	ND												
	H3-1	ND												
	G3-1	ND												
	F3-1	ND												
	H4-1	ND												
B	G3-4	ND												
	F3-4	ND												
	E3-4	ND												
	F4-1	ND												
	E4-1	ND												

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material  
T:\OAC\NW\Lab Doc\TEM Count Sheet rev. 1-11.xls

Raservois Environmental, Inc.  
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 CX N S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm <sup>2</sup> )	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm <sup>2</sup> )	385
Secondary Filter Area (mm <sup>2</sup> )	
QA Type	

Client :	R&K
Sample Type (A=Air, O=Dust):	A
Air volume (L) or dust area (cm <sup>2</sup> )	614
Date received by lab	9/20/11
Lab Job Number	220953
Lab Sample Number:	798816

Analyzed by	JB
Analysis date	9/26/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AIH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

## F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	K4-1	ND												
	H4-1	ND												
	G4-1	ND												
	H5-1	ND												
	G5-1	ND												
B	F3-3	ND												
	E3-3	ND												
	C3-3	ND												
	F5-3	ND												
	E5-3	ND												

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material  
T:\QAQC\IN\Lab Docs\TEM Count Sheet rev. 1-11.xls

Reservoir Environmental, Inc.  
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 CX N S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm <sup>2</sup> )	0.011
Scale: IL =	0.28 um
Scale: ID =	0.056 um
Primary filter area (mm <sup>2</sup> )	385
Secondary Filter Area (mm <sup>2</sup> )	
QA Type	

Client:	R&R
Sample Type (A=Air, D=Oust):	A
Air volume (L) or dust area (cm <sup>2</sup> )	568
Date received by lab	9/20/11
Lab Job Number:	220153
Lab Sample Number:	798817

Analyzed by	JB
Analysis date	9/26/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	0
Counting rules (ISO, AHERA, ASTM)	AA
Grid storage location	Month Analyzed
Scope Alignment	Data Analyzed

## F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	F3-1	ND												
	E3-1	ND					Prep A 70% in tank				3-5% debris			
	C3-1	ND					Prep B 90% in tank				3-5% debris			
	E4-4	ND												
	C4-4	ND												
B	H4-4	ND												
	G4-4	ND												
	F4-4	ND												
	E4-4	ND												
	C4-4	ND												

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

O = Chrysotile

NAM = Non-asbestos material  
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Reservoirs Environmental, Inc.  
TEIV Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 CX N S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm <sup>2</sup> )	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm <sup>2</sup> )	385
Secondary Filter Area (mm <sup>2</sup> )	
QA Type	

Client:	R&R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm <sup>2</sup> )	148
Date received by lab	9/20/11
Lab Job Number:	220153
Lab Sample Number:	798818

Analyzed by	JB
Analysis date	9/26/11
Method (D=Direct, I=Indirect, IA=indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AA
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

## F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	H3-3	ND												
	G3-3	ND												
	F3-3	ND												
	E5-4	ND												
	C5-4	ND												
B	G5-1	ND												
	F5-1	ND												
	E5-1	ND												
	G3-6	ND												
	F3-6	ND												

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material  
T:\BAC\NVLAP\Lab Does\ITEM Count Sheet rev. 1-11.xls

## Analytical Procedures – AHERA

Transmission electron microscopy/energy dispersive X-ray spectrometry/selected area electron diffraction (TEM/EDX/SAED) was employed in the analysis of the samples, which were collected on 25 mm mixed cellulose ester air filters. A portion of each filter was collapsed with acetone and etched in a plasma asher. The etched filter was then coated with a thin layer of carbon in a carbon side down. The sample was then placed inside a condensation washer and treated with acetone to remove the filter matrix and expose any inert material.

For each sample, enough grid openings on a 200 mesh TEM grid are analyzed to ensure an analytical sensitivity of at least 0.005 structures/cc. A minimum of four grid openings from two preparations are analyzed for each sample. The grid openings are searched for fibrous structures which, if present are analyzed by SAED and/or EDX (elemental analysis). The AHERA protocol requires SAED confirmation of enough chrysotile asbestos structures on each sample to cause the sample to exceed 70 structures/mm<sup>2</sup> (usually 4 or 5 structures). Both SAED and EDX confirmation are required of enough amphibole structures on each sample to cause the sample to exceed 70 structures/mm<sup>2</sup> (usually 4 or 5 structures) per sample. Either SAED or EDX is required for the remaining asbestos structures of either type. The morphology of each structure is determined and the length and the diameter of any asbestos structures are recorded. Asbestos fibers, bundles, cluster and matrices were identified and recorded. The asbestos structures have been defined in AHERA as follows:

<b>Fiber:</b>	is a structure having a minimum length greater than or equal to 0.5 micron with an aspect ratio of 5:1 or greater with substantially parallel sides.
<b>Bundle:</b>	is a structure composed of three or more fibers in parallel arrangement, with each fiber closer than the diameter of one fiber.
<b>Cluster:</b>	is a structure with fibers in random arrangements such that all fibers are intermixed and no single fiber is isolated from the group.
<b>Matrix:</b>	is a fiber or fibers with one end free and the other end embedded or hidden by a particulate. The exposed fiber end must meet the fiber definition given above.

If more than 50 asbestos structures are identified and confirmed on a sample, AHERA analysis may be terminated after completion of the grid opening, which contains the 50<sup>th</sup> structure. AHERA protocol requires the laboratory to reject any clearance sample which contains in excess of 25% total particulate loading or which appears to be unevenly loaded.

The AHERA protocol includes specific sampling requirements, including minimum numbers of samples and minimum air volumes. Specifically, the 70 structures/mm<sup>2</sup> clearance criteria is only allowed for sets five inside samples (collected in a group of 13 samples including: five outsides and three blanks) with volumes greater than 1200 liters (40 CFR Part 763, page 41894). Deviation from the AHERA sampling protocol may affect the validity of the analytical results. Analysis of samples collected by non-protocol methods are not accredited by NVLAP

### Equations Used for Calculations

$$\text{Area Analyzed, mm}^2 = \# \text{ GO counted} \times \text{Average GO Area (mm)}^2$$

$$\text{Concentration, s/cc} = \frac{\# \text{ Asbestos Structures}}{\# \text{ GO Counted}} \times \frac{1}{\text{Volume (L)}} \times \frac{\text{Eff. Filter Area (mm}^2\text{)}}{\text{Average GO area (mm}^2\text{)}} \times \frac{\text{IL}}{1000\text{cc}}$$

$$\text{Filter loading, s/mm}^2 = \frac{\# \text{ Asbestos structures}}{\text{Area Analyzed (mm}^2\text{)}}$$

GO = TEM grid opening



## 3<sup>rd</sup> West Substation Site Project Safety Audit

Project: 3<sup>rd</sup> West Sub Station

Date: 9/19/11

Location: 3<sup>rd</sup> West, 1<sup>st</sup> South, SLC

Job Number: \_\_\_\_\_

Survey Conducted By: Iustin Kargis

Title: \_\_\_\_\_

Standard	Title	In Compliance	Out of Compliance	N/A	Corrective Action Taken and Date
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1926.59	Hazard Communication Program, List of Chemicals, Training, MSDSs.			x	
1926.500 (b) & (d) (old standard)	Guardrails on open sided floors, floor holes and runways.			x	
1926.404 (b)	Ground fault circuit interrupters or an assured equipment grounding conductor program in use.			x	
1926.451 (b)	The employer shall instruct each employee in the recognition and avoidance of unsafe conditions.			x	
1926.451 (d)	Tubular welded scaffolds shall be properly braced so that they are plumb, square and rigid; legs on plumb, adjustable, mud sills, etc. to support the maximum load; guardrails and toeboards shall be installed.			x	
1926.100 (a)	Head protection, where there is a possible danger of head injury.	x			

		In Compliance	Out of Compliance	N/A	
<i>Standard</i>	<i>Title</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Corrective Action Taken and Date</i>
1926.652 (a) (1)	Excavation protective systems; examination by competent person when less than 5 feet in depth.			x	
1926.20 (b) (2)	Employer responsibility to initiate and maintain safety and health programs.			x	
1926.20 (b) (1)	Employer responsibility to provide for frequent and regular inspections by designated competent persons.			x	
1926.451 (e)	Manually propelled scaffolds shall have tight planking for the full width, platforms secured, ladder or stairway provided, suitable footing, stand plumbs, wheels locked, guardrails and toeboards.			x	
1926.1052 (c) (1)	Stair rail and handrail along each unprotected edge.			x	
1926.25 (a)	Debris, scrap lumber with protruding nails, not cleared for work areas, stairs and around structures.			x	
1926.50	First aid shall be available in the absence of an infirmary, or other that is reasonably accessible; first aid supplies shall be accessible and telephone numbers posted.			x	
1926.451 (a) (13)	Scaffolding safe access not provided by ladder or equivalent.			x	
1926.651 (k) (1)	Excavations, protective systems, inspected daily by a competent person and as needed.			x	
1926.403 (b) (2)	Employer shall ensure electrical equipment is free from recognized hazards, is suitable, used in accordance with the listing, labeling or certification.			x	



		In Compliance	Out of Compliance	N/A	
<i>Standard</i>	<i>Title</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Corrective Action Taken and Date</i>
1926.451 (a) (4)	Scaffolding shall have guardrails and toeboards when more than 10 feet high and when less than 45 inches of work space.			x	
1926.405 (g) (2)	Flexible cords shall be used without splice or tap; strain relief shall be provided.			x	
1926.405 (b)	Electrical boxes, fittings shall have covers, faceplates or canopy and holes shall be smooth where cords pass through; and unused openings in cabinets/boxes shall be closed.	x			
1926.701 (b)	Reinforcing steel onto which employees could fall shall be guarded.			x	
1926.1053 (b) (1)	Portable ladder side rails extend at least 3 feet or be secured at top.			x	
1926.651 (j) (2)	Excavations shall have materials or equipment placed at least 2 feet from the edge.			x	
1926.651 (c) (2)	Excavations shall have a safe means of egress such as ladders, ramps, etc.			x	
1926.150 (c) (1)	Portable fire fighting equipment shall be provided and extinguishers shall be inspected periodically.			x	
1926.102 (a) (1)	Eye and face protection shall be provided.	x			
1926.300 (b) (2)	Guards for power tools shall be used and moving parts of equipment shall be guarded.			x	
1926.350 (a) (9)	Oxygen cylinders in storage shall be separated from fuel gas cylinders by at least 20 feet or a ½ fire resistance barrier.			x	

		In Compliance	Out of Compliance	N/A	Corrective Action Taken and Date
Standard	Title	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1926.405 (a) (2) (ii) (e) & (f)	Temporary lights shall be protected from breakage, not suspended by their cords and extension cord.			X	
1926.405 (a) (2) (ii) (j)	Extension cords used with portable electric tools shall be of three wire type and designed for hard or extra hard usage.			x	
1926.105 (a)	Workplaces more than 25 feet above the ground or water shall have safety nets when ladder, safety line/belts, temporary floors, scaffolds, catch platform are not practical.			x	
1926.1051 (a)	Stairway or ladder shall be provided at all access points where there is a break in elevation of 19 inches or more.			x	
1926.451 (a) (2)	Scaffolding footing or anchorage shall be sound, rigid and capable of carrying the maximum intended load.			x	
1926.500 (c) (1) (old standard)	Wall opening shall be guarded.			x	
1926.404 (f) (7)	Electrical equipment connected by cord and plug shall be grounded except if there is an isolating transformer of the tool is double insulated.			x	
1926.556 (b) (2)	When working from an aerial lift, a full body harness and lanyard attached to the boom or basket.			x	
1926.501 (b) (1) (new standard)	Guardrails, safety nets or personal fall arrest system shall be used at 6 feet or more.			x	

Standard	Title	In Compliance	Out of Compliance	N/A	Corrective Action Taken and Date
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1926.451 (a) (14)	Scaffold planking shall extend over their end support not less than 6 inches and not more than 12 inches.			x	
1926.602 (a) (9)	Bi-directional earth moving equipment shall have audible alarms.			x	
1926.451 (a) (3)	Scaffolding shall be erected, moved, dismantled or altered under the supervision of a competent person.			x	
1926.550 (b) (2)	Cranes, crawler, truck or locomotive, shall meet the design, testing, maintenance, and operation per ANSI B30.5_1968. The most recent certification shall be on file until a new one is prepared.			x	

**Comments:**

Tailboard meeting items: Role definition for RMP, CVE, R&R, Newman discussed. Check and account for dump trucks as they leave site. Newman to check on landfill allowances for LA in dirt carried from site. Communication will help solve problems before they get out of hand.

Line crew removed cables from underground vaults/conduit.

# 3<sup>RD</sup> WEST SUBSTATION REMEDIATION PROJECT

## HEALTH SAFETY MANAGER (HSM)

### DAILY CHECKLIST

DATE: 9/19/11

#### General

- ☒ Work area Health and Safety Inspection
- ☒ Review and if necessary update Activity Hazard Analyses (AHA) based on planned site activities for the day
- ☒ Safety Planning or "Tailgate" mandatory meeting for all employees and contractors prior to commencement of any site work. Instruction, review hazards, health & safety issues and any modifications to the CSHASP
- NA Site hazard and safety instruction for all first time employees, contractors or visitors
- Complete Employee Meeting Record Form B (where applicable)
- Document required Respirator Training completion with Form H
- NA Complete all CSHASP Forms (for applicable activities planned for that day)
- NA Illness/Injury Report Form A
- NA Site-Specific Training Record Form C
- NA Hot Work Permit Form D
- NA Trench/Evacuation Permit Form E
- NA Combined Space Entry Permit Form F
- ☒ Secure the site at the end of the workday

#### Sampling

- NA Soil Confirmation sampling for any newly excavated areas
- ☒ Stationary Air Monitoring during contaminated soil removal around the perimeter of the exclusions zone
- NA Personal Breathing Zone Monitoring on personnel conducting contaminated dust and soil removal
- NA Digitally photograph each sample location and at any place field sampling personnel determined necessary
- NA Electronically file photo files into the on-site database
- ☒ Complete Field Documentation
- ☒ Field Sample Data Sheets (FSDS)
- ☒ Logbook
- NA On-site computer database
- ☒ Label each sample media with a unique number
- ☒ Seal sample(s) in zip lock plastic bags
- ☒ Complete and include Chain of Custody (COC) Form required for shipping of samples to appropriate laboratory
- ☒ Package samples for transport IAW SOP 2-1, Packaging and Shipping of Environmental Samples
- NA Review and disseminate sample results as received from the laboratories to Project Manager and other appropriate managers and employees
- NA Electronically file sample reports into on-site database



## 3<sup>rd</sup> West Substation Site Project Safety Audit

Project: 3<sup>rd</sup> West Sub Station

Date: 9/20/11

Location: 3<sup>rd</sup> West, 1<sup>st</sup> South, SLC

Job Number: \_\_\_\_\_

Survey Conducted By: Justin Kargis

Title: \_\_\_\_\_

		In Compliance	Out of Compliance	N/A	
Standard	Title	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Corrective Action Taken and Date
1926.59	Hazard Communication Program, List of Chemicals, Training, MSDSs.			x	
1926.500 (b) & (d) (old standard)	Guardrails on open sided floors, floor holes and runways.			x	
1926.404 (b)	Ground fault circuit interrupters or an assured equipment grounding conductor program in use.			x	
1926.451 (b)	The employer shall instruct each employee in the recognition and avoidance of unsafe conditions.			x	
1926.451 (d)	Tubular welded scaffolds shall be properly braced so that they are plumb, square and rigid; legs on plumb, adjustable, mud sills, etc. to support the maximum load; guardrails and toeboards shall be installed.			x	
1926.100 (a)	Head protection, where there is a possible danger of head injury.	x			

Standard	Title	In Compliance	Out of Compliance	N/A	Corrective Action Taken and Date
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1926.652 (a) (1)	Excavation protective systems; examination by competent person when less than 5 feet in depth.			x	
1926.20 (b) (2)	Employer responsibility to initiate and maintain safety and health programs.			x	
1926.20 (b) (1)	Employer responsibility to provide for frequent and regular inspections by designated competent persons.			x	
1926.451 (e)	Manually propelled scaffolds shall have tight planking for the full width, platforms secured, ladder or stairway provided, suitable footing, stand plumbs, wheels locked, guardrails and toeboards.			x	
1926.1052 (c) (1)	Stair rail and handrail along each unprotected edge.			x	
1926.25 (a)	Debris, scrap lumber with protruding nails, not cleared for work areas, stairs and around structures.			x	
1926.50	First aid shall be available in the absence of an infirmary, or other that is reasonably accessible; first aid supplies shall be accessible and telephone numbers posted.			x	
1926.451 (a) (13)	Scaffolding safe access not provided by ladder or equivalent.			x	
1926.651 (k) (1)	Excavations, protective systems, inspected daily by a competent person and as needed.			x	
1926.403 (b) (2)	Employer shall ensure electrical equipment is free from recognized hazards, is suitable, used in accordance with the listing, labeling or certification.			x	

Standard	Title	In Compliance	Out of Compliance	N/A	Corrective Action Taken and Date
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1926.451 (a) (4)	Scaffolding shall have guardrails and toeboards when more than 10 feet high and when less than 45 inches of work space.			x	
1926.405 (g) (2)	Flexible cords shall be used without splice or tap; strain relief shall be provided.			x	
1926.405 (b)	Electrical boxes, fittings shall have covers, faceplates or canopy and holes shall be smooth where cords pass through; and unused openings in cabinets/boxes shall be closed.	x			
1926.701 (b)	Reinforcing steel onto which employees could fall shall be guarded.			x	
1926.1053 (b) (1)	Portable ladder side rails extend at least 3 feet or be secured at top.			x	
1926.651 (j) (2)	Excavations shall have materials or equipment placed at least 2 feet from the edge.			x	
1926.651 (c) (2)	Excavations shall have a safe means of egress such as ladders, ramps, etc.			x	
1926.150 (c) (1)	Portable fire fighting equipment shall be provided and extinguishers shall be inspected periodically.			x	
1926.102 (a) (1)	Eye and face protection shall be provided.	x			
1926.300 (b) (2)	Guards for power tools shall be used and moving parts of equipment shall be guarded.			x	
1926.350 (a) (9)	Oxygen cylinders in storage shall be separated from fuel gas cylinders by at least 20 feet or a 1/2 fire resistance barrier.			x	

		In Compliance	Out of Compliance	N/A	Corrective Action Taken and
Standard	Title	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Date
1926.405 (a) (2) (ii) (e) & (f)	Temporary lights shall be protected from breakage, not suspended by their cords and extension cord.			X	
1926.405 (a) (2) (ii) (j)	Extension cords used with portable electric tools shall be of three wire type and designed for hard or extra hard usage.			x	
1926.105 (a)	Workplaces more than 25 feet above the ground or water shall have safety nets when ladder, safety line/belts, temporary floors, scaffolds, catch platform are not practical.			x	
1926.1051 (a)	Stairway or ladder shall be provided at all access points where there is a break in elevation of 19 inches or more.			x	
1926.451 (a) (2)	Scaffolding footing or anchorage shall be sound, rigid and capable of carrying the maximum intended load.			x	
1926.500 (c) (1) (old standard)	Wall opening shall be guarded.			x	
1926.404 (f) (7)	Electrical equipment connected by cord and plug shall be grounded except if there is an isolating transformer of the tool is double insulated.			x	
1926.556 (b) (2)	When working from an aerial lift, a full body harness and lanyard attached to the boom or basket.			x	
1926.501 (b) (1) (new standard)	Guardrails, safety nets or personal fall arrest system shall be used at 6 feet or more.			x	



		In Compliance	Out of Compliance	N/A	
<i>Standard</i>	<i>Title</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Corrective Action Taken and Date</i>
1926.451 (a) (14)	Scaffold planking shall extend over their end support not less than 6 inches and not more than 12 inches.			x	
1926.602 (a) (9)	Bi-directional earth moving equipment shall have audible alarms.			x	
1926.451 (a) (3)	Scaffolding shall be erected, moved, dismantled or altered under the supervision of a competent person.			x	
1926.550 (b) (2)	Cranes, crawler, truck or locomotive, shall meet the design, testing, maintenance, and operation per ANSI B30.5_1968. The most recent certification shall be on file until a new one is prepared.			x	

Comments:

Met with Chris Rongstad, safety administrator from CVE. He delivered tyvek suits that do not have foot protection.

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## 3<sup>RD</sup> WEST SUBSTATION REMEDIATION PROJECT

# HEALTH SAFETY MANAGER (HSM)

### DAILY CHECKLIST

DATE: 9/20/11

#### General

- ☒ Work area Health and Safety Inspection
- ☒ Review and if necessary update Activity Hazard Analyses (AHA) based on planned site activities for the day
- ☒ Safety Planning or "Tailgate" mandatory meeting for all employees and contractors prior to commencement of any site work. Instruction, review hazards, health & safety issues and any modifications to the CSHASP
- NA Site hazard and safety instruction for all first time employees, contractors or visitors
- Complete Employee Meeting Record Form B (where applicable)
- Document required Respirator Training completion with Form H
- NA Complete all CSHASP Forms (for applicable activities planned for that day)
- NA Illness/Injury Report Form A
- NA Site-Specific Training Record Form C
- NA Hot Work Permit Form D
- NA Trench/Evacuation Permit Form E
- NA Combined Space Entry Permit Form F
- ☒ Secure the site at the end of the workday

#### Sampling

- NA Soil Confirmation sampling for any newly excavated areas
- ☒ Stationary Air Monitoring during contaminated soil removal around the perimeter of the exclusions zone
- NA Personal Breathing Zone Monitoring on personnel conducting contaminated dust and soil removal
- NA Digitally photograph each sample location and at any place field sampling personnel determined necessary
- NA Electronically file photo files into the on-site database
- NA Complete Field Documentation
- ☒ Field Sample Data Sheets (FSDS)
- ☒ Logbook
- NA On-site computer database
- ☒ Label each sample media with a unique number
- ☒ Seal sample(s) in zip lock plastic bags
- ☒ Complete and include Chain of Custody (COC) Form required for shipping of samples to appropriate laboratory
- ☒ Package samples for transport IAW SOP 2-1, Packaging and Shipping of Environmental Samples
- NA Review and disseminate sample results as received from the laboratories to Project Manager and other appropriate managers and employees
- NA Electronically file sample reports into on-site database



## 3<sup>rd</sup> West Substation Site Project Safety Audit

Project: 3<sup>rd</sup> West Sub Station

Date: 9/21/11

Location: 3<sup>rd</sup> West, 1<sup>st</sup> South, SLC

Job Number: \_\_\_\_\_

Survey Conducted By: Justin Kargis

Title: \_\_\_\_\_

		In Compliance	Out of Compliance	N/A	
Standard	Title	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Corrective Action Taken and Date
1926.59	Hazard Communication Program, List of Chemicals, Training, MSDSs.			x	
1926.500 (b) & (d) (old standard)	Guardrails on open sided floors, floor holes and runways.			x	
1926.404 (b)	Ground fault circuit interrupters or an assured equipment grounding conductor program in use.			x	
1926.451 (b)	The employer shall instruct each employee in the recognition and avoidance of unsafe conditions.			x	
1926.451 (d)	Tubular welded scaffolds shall be properly braced so that they are plumb, square and rigid; legs on plumb, adjustable, mud sills, etc. to support the maximum load; guardrails and toeboards shall be installed.			x	
1926.100 (a)	Head protection, where there is a possible danger of head injury.	x			

		In Compliance	Out of Compliance	N/A	
<i>Standard</i>	<i>Title</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Corrective Action Taken and Date</i>
1926.652 (a) (1)	Excavation protective systems; examination by competent person when less than 5 feet in depth.			x	
1926.20 (b) (2)	Employer responsibility to initiate and maintain safety and health programs.			x	
1926.20 (b) (1)	Employer responsibility to provide for frequent and regular inspections by designated competent persons.			x	
1926.451 (e)	Manually propelled scaffolds shall have tight planking for the full width, platforms secured, ladder or stairway provided, suitable footing, stand plumbs, wheels locked, guardrails and toeboards.			x	
1926.1052 (c) (1)	Stair rail and handrail along each unprotected edge.			x	
1926.25 (a)	Debris, scrap lumber with protruding nails, not cleared for work areas, stairs and around structures.			x	
1926.50	First aid shall be available in the absence of an infirmary, or other that is reasonably accessible; first aid supplies shall be accessible and telephone numbers posted.			x	
1926.451 (a) (13)	Scaffolding safe access not provided by ladder or equivalent.			x	
1926.651 (k) (1)	Excavations, protective systems, inspected daily by a competent person and as needed.			x	
1926.403 (b) (2)	Employer shall ensure electrical equipment is free from recognized hazards, is suitable, used in accordance with the listing, labeling or certification.			x	

		In Compliance	Out of Compliance	N/A	
<i>Standard</i>	<i>Title</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Corrective Action Taken and Date</i>
1926.451 (a) (4)	Scaffolding shall have guardrails and toeboards when more than 10 feet high and when less than 45 inches of work space.			x	
1926.405 (g) (2)	Flexible cords shall be used without splice or tap; strain relief shall be provided.			x	
1926.405 (b)	Electrical boxes, fittings shall have covers, faceplates or canopy and holes shall be smooth where cords pass through; and unused openings in cabinets/boxes shall be closed.	x			
1926.701 (b)	Reinforcing steel onto which employees could fall shall be guarded.			x	
1926.1053 (b) (1)	Portable ladder side rails extend at least 3 feet or be secured at top.			x	
1926.651 (j) (2)	Excavations shall have materials or equipment placed at least 2 feet from the edge.			x	
1926.651 (c) (2)	Excavations shall have a safe means of egress such as ladders, ramps, etc.			x	
1926.150 (c) (1)	Portable fire fighting equipment shall be provided and extinguishers shall be inspected periodically.			x	
1926.102 (a) (1)	Eye and face protection shall be provided.	x			
1926.300 (b) (2)	Guards for power tools shall be used and moving parts of equipment shall be guarded.			x	
1926.350 (a) (9)	Oxygen cylinders in storage shall be separated from fuel gas cylinders by at least 20 feet or a ½ fire resistance barrier.			x	

		In Compliance	Out of Compliance	N/A	
<i>Standard</i>	<i>Title</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Corrective Action Taken and Date</i>
1926.405 (a) (2) (ii) (e) & (f)	Temporary lights shall be protected from breakage, not suspended by their cords and extension cord.			X	
1926.405 (a) (2) (ii) (j)	Extension cords used with portable electric tools shall be of three wire type and designed for hard or extra hard usage.			x	
1926.105 (a)	Workplaces more than 25 feet above the ground or water shall have safety nets when ladder, safety line/belts, temporary floors, scaffolds, catch platform are not practical.			x	
1926.1051 (a)	Stairway or ladder shall be provided at all access points where there is a break in elevation of 19 inches or more.			x	
1926.451 (a) (2)	Scaffolding footing or anchorage shall be sound, rigid and capable of carrying the maximum intended load.			x	
1926.500 (c) (1) (old standard)	Wall opening shall be guarded.			x	
1926.404 (f) (7)	Electrical equipment connected by cord and plug shall be grounded except if there is an isolating transformer of the tool is double insulated.			x	
1926.556 (b) (2)	When working from an aerial lift, a full body harness and lanyard attached to the boom or basket.			x	
1926.501 (b) (1) (new standard)	Guardrails, safety nets or personal fall arrest system shall be used at 6 feet or more.			x	

		In Compliance	Out of Compliance	N/A	
<i>Standard</i>	<i>Title</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Corrective Action Taken and Date</i>
1926.451 (a) (14)	Scaffold planking shall extend over their end support not less than 6 inches and not more than 12 inches.			x	
1926.602 (a) (9)	Bi-directional earth moving equipment shall have audible alarms.			x	
1926.451 (a) (3)	Scaffolding shall be erected, moved, dismantled or altered under the supervision of a competent person.			x	
1926.550 (b) (2)	Cranes, crawler, truck or locomotive, shall meet the design, testing, maintenance, and operation per ANSI B30.5_1968. The most recent certification shall be on file until a new one is prepared.			x	

Comments:

Met with Chris Rongstad, safety administrator from CVE. He delivered tyvek suits that do not have foot protection. Determined that he will bring protective booties after later follow-up.

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# 3<sup>RD</sup> WEST SUBSTATION REMEDIATION PROJECT

## HEALTH SAFETY MANAGER (HSM)

### DAILY CHECKLIST

DATE: 9/21/11

#### General

- Work area Health and Safety Inspection
- ☒ Review and if necessary update Activity Hazard Analyses (AHA) based on planned site activities for the day
- ☒ Safety Planning or "Tailgate" mandatory meeting for all employees and contractors prior to commencement of any site work. Instruction, review hazards, health & safety issues and any modifications to the CSHASP
- NA Site hazard and safety instruction for all first time employees, contractors or visitors
- Complete Employee Meeting Record Form B (where applicable)
- Document required Respirator Training completion with Form H
- NA Complete all CSHASP Forms (for applicable activities planned for that day)
  - NA Illness/Injury Report Form A
  - NA Site-Specific Training Record Form C
  - NA Hot Work Permit Form D
  - NA Trench/Evacuation Permit Form E
  - NA Combined Space Entry Permit Form F
  - ☒ Secure the site at the end of the workday

#### Sampling

- NA Soil Confirmation sampling for any newly excavated areas
- ☒ Stationary Air Monitoring during contaminated soil removal around the perimeter of the exclusions zone
- NA Personal Breathing Zone Monitoring on personnel conducting contaminated dust and soil removal
- NA Digitally photograph each sample location and at any place field sampling personnel determined necessary
- NA Electronically file photo files into the on-site database
- NA Complete Field Documentation
- ☒ Field Sample Data Sheets (FSDS)
- ☒ Logbook
- NA On-site computer database
- ☒ Label each sample media with a unique number
- ☒ Seal sample(s) in zip lock plastic bags
- NA Complete and include Chain of Custody (COC) Form required for shipping of samples to appropriate laboratory
- NA Package samples for transport IAW SOP 2-1, Packaging and Shipping of Environmental Samples
- NA Review and disseminate sample results as received from the laboratories to Project Manager and other appropriate managers and employees
- NA Electronically file sample reports into on-site database



## 3<sup>RD</sup> WEST SUBSTATION REMEDIATION PROJECT

# HEALTH SAFETY MANAGER (HSM)

### DAILY CHECKLIST

DATE: 9/22/11

#### General

- ☒ Work area Health and Safety Inspection
- ☒ Review and if necessary update Activity Hazard Analyses (AHA) based on planned site activities for the day
- NA Safety Planning or "Tailgate" mandatory meeting for all employees and contractors prior to commencement of any site work. Instruction, review hazards, health & safety issues and any modifications to the CSHASP
- NA Site hazard and safety instruction for all first time employees, contractors or visitors
  - ☐ Complete Employee Meeting Record Form B (where applicable)
  - ☐ Document required Respirator Training completion with Form H
- NA Complete all CSHASP Forms (for applicable activities planned for that day)
  - ☐ Illness/Injury Report Form A
  - ☐ Site-Specific Training Record Form C
  - ☐ Hot Work Permit Form D
  - ☐ Trench/Evacuation Permit Form E
  - ☐ Combined Space Entry Permit Form F
- ☒ Secure the site at the end of the workday

#### Sampling

- NA Soil Confirmation sampling for any newly excavated areas
- ☒ Stationary Air Monitoring during contaminated soil removal around the perimeter of the exclusions zone
- NA Personal Breathing Zone Monitoring on personnel conducting contaminated dust and soil removal
- NA Digitally photograph each sample location and at any place field sampling personnel determined necessary
  - ☒ Electronically file photo files into the on-site database
  - ☒ Complete Field Documentation
    - ☒ Field Sample Data Sheets (FSDS)
    - ☒ Logbook
  - NA On-site computer database
- ☒ Label each sample media with a unique number
- ☒ Seal sample(s) in zip lock plastic bags
- ☒ Complete and include Chain of Custody (COC) Form required for shipping of samples to appropriate laboratory
- ☒ Package samples for transport IAW SOP 2-1, Packaging and Shipping of Environmental Samples
- NA Review and disseminate sample results as received from the laboratories to Project Manager and other appropriate managers and employees
- NA Electronically file sample reports into on-site database



PHOTO 1



PHOTO 2



PHOTO 3



PHOTO 4

## **R & R**Environmental, Inc.

47 West 9000 South, Suite #2, Sandy, Utah 84070  
(801) 352-2380 • Fax: (801) 352-2381

PROJECT NO:

DESIGNED BY:

SCALE:

REVIEWED BY:

DCR

DRAWN BY:

JMK

DATE:

9-22-11

FILE:

## SITE PHOTOGRAPHS



**3<sup>rd</sup> West Substation**  
**"2011 Upgrade Project"**  
**Salt Lake City, Utah**



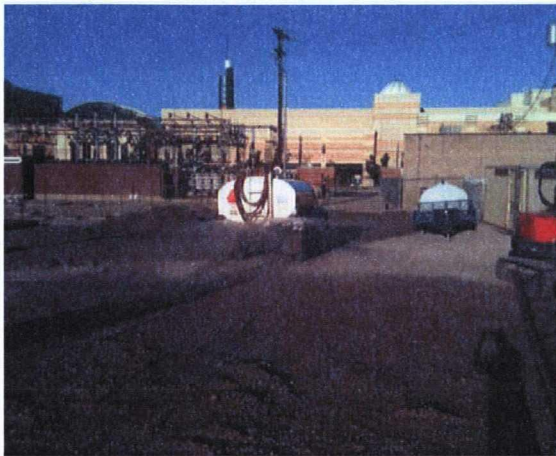


PHOTO 1

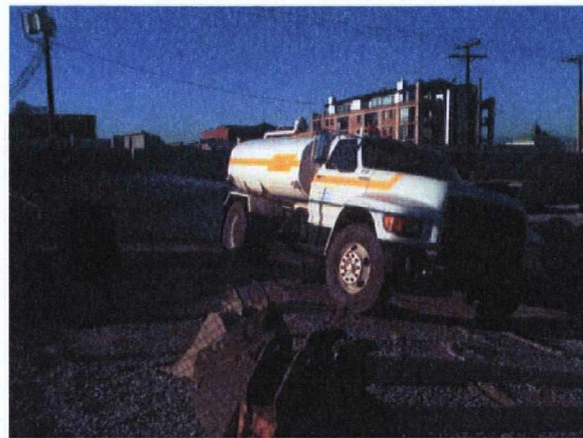


PHOTO 2

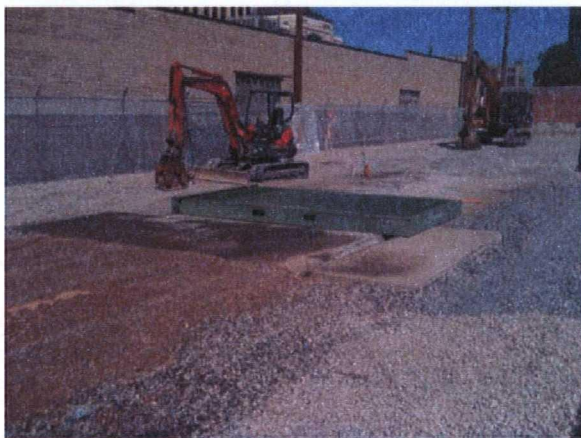


PHOTO 3



PHOTO 4

## **R & R**Environmental, Inc.

47 West 9000 South, Suite #2, Sandy, Utah 84070  
(801) 352-2380 • Fax: (801) 352-2381

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DATE:

9/23/11

FILE:

## SITE PHOTOGRAPHS



**3<sup>rd</sup> West Substation**  
**"2011 Upgrade Project"**  
**Salt Lake City, Utah**

# PACIFICORP OPERATIONS - Field Construction Representative Daily Log

PROJECT NAME: Third West Sub - Rebuild

DATE: Monday, September 19, 2011

PO & Work Order NO.: 3000078050 / 10035803

MAIN CONTRACTOR: RMP

Crew Start Time: 7:00

Crew Stop Time: 16:30

Tot Hrs mns: 9:30

FCR Start Time: 6:45

FCR Stop Time: 16:40

Tot Hrs mns: 9:55

Use military time format 00:00

WEATHER CONDITIONS: Sunny - 83 degrees

## DESCRIPTION: (work performed, general comments, instructions to contractor, # of crew members onsite.)

CVE crew removed control cables from the vault on the north end of the 4 kV switchgear. A meeting was held on-site with representatives from RMP, R&R, Eagle Environmental, CVE, Newman, Wilding, and Kenny. Communication and issue resolution were discussed, as well as schedule for the next few days. CVE grounded the temporary fence between the construction area and the energized 46 kV yard. Wilding provided a copy of the SWPP.

## IF WORKING IN ENERGIZED SUBSTATION:

Dispatcher login, name and time: Manny LuHaun 06:45

Dispatcher logout, name and time: Gus Montanez 16:40

## DISCREPANCIES:

## IMMEDIATE CORRECTIVE ACTION TAKEN:


## DELAYS OR LOST TIME ENCOUNTERED:

--

## EQUIPMENT (working, delivered, idle):

Pickup, portable toilet, forklift, 2 dumpsters, office trailer, conex, exclusion zone conex, water wagon, portable wash-down structure, trackhoe

## OSHA Recordable Safety Incidents:

Reported by:

Time:




Russ Johnson

Field Construction Representative

# PACIFICORP OPERATIONS - Field Construction Representative Daily Log

PROJECT NAME: Third West Sub - Rebuild

DATE : Tuesday, September 20, 2011

PO & Work Order NO. : 3000078050 / 10035803

MAIN CONTRACTOR : RMP

Crew Start Time: 7:00

Crew Stop Time: 15:30

Tot Hrs mns: 8:30

FCR Start Time: 6:45

FCR Stop Time: 15:30

Tot Hrs mns: 8:45

Use military time format 00:00

WEATHER CONDITIONS: Sunny - 84 degrees

**DESCRIPTION: (work performed, general comments, instructions to contractor, # of crew members onsite.)**

No CVE crews on site today, except for Neil Love, who is reviewing drawings and specifications. R&R installed monitors. Chris Rongstad, Safety Administrator for CVE came by to familiarize himself with the project. The circus has taken over the east half of the parking lot and our access to the east substation gate will be limited to small truck/trailer traffic through this weekend. Received approval to limit the need for Tyvek/Respirators, once contractor has adequately backfilled their excavations, including the sides, so as to encapsulize the excavation prevent exposure to possible contaminated materials.

**IF WORKING IN ENERGIZED SUBSTATION:**

Dispatcher login, name and time: Manny LuHaun 06:50

Dispatcher logout, name and time: Ken Barto 15:30

**DISCREPANCIES:**

**IMMEDIATE CORRECTIVE ACTION TAKEN:**


**DELAYS OR LOST TIME ENCOUNTERED:**

--

**EQUIPMENT (working, delivered, idle):**

Pickup, portable toilet, forklift, 2 dumpsters, office trailer, conex, exclusion zone conex, water wagon, portable wash-down structure, trackhoe

OSHA Recordable Safety Incidents:	Reported by:	Time:



Russ Johnson  
Field Construction Representative

# PACIFICORP OPERATIONS - Field Construction Representative Daily Log

PROJECT NAME: Third West Sub - Rebuild

DATE : Wednesday, September 21, 2011

PO & Work Order NO. : 3000078050 / 10035803

MAIN CONTRACTOR : RMP

Crew Start Time: 6:50

Crew Stop Time: 17:00

Tot Hrs mns: 10:10

FCR Start Time: 6:50

FCR Stop Time: 17:00

Tot Hrs mns: 10:10

Use military time format 00:00

WEATHER CONDITIONS: Sunny - 83 degrees

## DESCRIPTION: (work performed, general comments, instructions to contractor, # of crew members onsite.)

The circus has arrived. Elephants, and lions, and tigers, and loud music, and dancing girls. R&R set up air monitors. An additional conex was delivered to allow for a larger area for the crews to suit up and store their gear before entering the exclusion zone. Newman mobilized equipment to the site. CVE delivered lumber and a trailer. Brian King and Robert Hamilton RMP Environmental, stopped by to see what is going on. Eagle was here in the morning to connect up the water supply in the conex and to educate people as to the proper procedure for suiting up and going thru the decon process.

## IF WORKING IN ENERGIZED SUBSTATION:

Dispatcher login, name and time: Jim Bowman 0650  
Dispatcher logout, name and time: Manny Luhaun 1650

## DISCREPANCIES:

## IMMEDIATE CORRECTIVE ACTION TAKEN:


## DELAYS OR LOST TIME ENCOUNTERED:

--

## EQUIPMENT (working, delivered, idle):

Pickup, portable toilet, forklift, 2 dumpsters, office trailer, conex, exclusion zone conex, water wagon, portable wash-down structure, trackhoe, mini-ex, bobcat

--

## OSHA Recordable Safety Incidents:

Reported by:

Time:




**ROCKY MOUNTAIN  
POWER**

A DIVISION OF PACIFICORP

Russ Johnson

Field Construction Representative

# PACIFICORP OPERATIONS - Field Construction Representative Daily Log

PROJECT NAME: Third West Sub - Rebuild

DATE : Thursday, September 22, 2011

PO & Work Order NO. : 3000078050 / 10035803

MAIN CONTRACTOR : RMP

Crew Start Time: 6:50

Crew Stop Time: 17:30

Tot Hrs mns: 10:40

FCR Start Time: 6:50

FCR Stop Time: 17:30

Tot Hrs mns: 10:40

Use military time format 00:00

WEATHER CONDITIONS: Sunny - 83 degrees

## DESCRIPTION: (work performed, general comments, instructions to contractor, # of crew members onsite.)

R&R set up monitors. Newman graded the area near the decon conex to allow for adding another conex. Newman mobed a bobcat and a mini-ex to the site yesterday. Newman positioned the new conex on the east side of the original conex and scraped up gravel from the clean (east) side of the yard and will proceed to haul it away. Newman cleaned up the old gates and posts from the initial exclusion area. Talked to Alan Bezzant and Roger Fuerst about a possible re-routing of the conduits for the 46 kV lines, as there are too many elbows to pull the wire through as it is currently laid out.

## IF WORKING IN ENERGIZED SUBSTATION:

Dispatcher login, name and time: Jim Bowman 0650

Dispatcher logout, name and time: Al Swinski 1955 (didn't work this late, just didn't call in until late)

## DISCREPANCIES:

## IMMEDIATE CORRECTIVE ACTION TAKEN:


## DELAYS OR LOST TIME ENCOUNTERED:

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## EQUIPMENT (working, delivered, idle):

Pickup, portable toilet, forklift, 2 dumpsters, office trailer, conex, exclusion zone conex (2), water wagon, portable wash-down structure, trackhoe, mini-ex, bobcat

## OSHA Recordable Safety Incidents:

Reported by:

Time:




Russ Johnson

Field Construction Representative

# PACIFICORP OPERATIONS - Field Construction Representative Daily Log

PROJECT NAME: Third West Sub - Rebuild

DATE: Friday, September 23, 2011

PO & Work Order NO. : 3000078050 / 10035803

MAIN CONTRACTOR : RMP

Crew Start Time: 6:50

Crew Stop Time: 16:00

Tot Hrs mns: 9:10

FCR Start Time: 6:50

FCR Stop Time: 16:15

Tot Hrs mns: 9:25

Use military time format 00:00

WEATHER CONDITIONS: Sunny - 83 degrees

**DESCRIPTION: (work performed, general comments, instructions to contractor, # of crew members onsite.)**

R&R set up monitors. Hung SWPPP banner on fence, along with laminated copies of the site layout and plan summary. We have a binder in the trailer that provides details. Newman spotted the portable truck wash-out on the old No. 6 transformer/switchgear pad. This will allow trucks to enter the yard from the north gate, get loaded, drive onto the wash-out pit and then exit into the "clean zone". Eagle has been contacted to be here on Monday to provide training to site personnel on the process for entering and exiting the exclusion zone. Newman has a water truck on site for dust control. R&R is prepared to take soil samples on Monday, 9/26, if necessary.

**IF WORKING IN ENERGIZED SUBSTATION:**

Dispatcher login, name and time: Al Swinski 0650

Dispatcher logout, name and time: Al Swinski 1615

**DISCREPANCIES:**

**IMMEDIATE CORRECTIVE ACTION TAKEN:**


**DELAYS OR LOST TIME ENCOUNTERED:**

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**EQUIPMENT (working, delivered, idle):**

Pickup, portable toilet, forklift, 2 dumpsters, office trailer, conex, exclusion zone conex (2), water wagon, portable wash-down structure, trackhoe, mini-ex, bobcat, water truck

**OSHA Recordable Safety Incidents:**

Reported by:

Time:




Russ Johnson

Field Construction Representative